

IN THE SPECIFICATION

Please amend the specification as follows:

Replace the paragraph on page 2, between lines 1-2 of the specification with the following:

It is an object of the invention-present system to provide an electrophoretic display which is brighter and/or enables a higher resolution.

Replace the paragraph on page 2, between lines 3-7 of the specification with the following:

A first aspect of the invention-present system provides an electrophoretic display ~~as claimed in claim 1~~. A second aspect of the invention-present system provides a method of driving an electrophoretic display ~~as claimed in claim 20~~. A third aspect of the invention-present system provides a display apparatus comprising such an electrophoretic display ~~as claimed in claim 21~~. Advantageous embodiments of the invention-present system are defined in the dependent claims.

Replace the paragraph on page 2, between lines 8-10 of the specification with the following:

The electrophoretic display in accordance with the ~~invention present system~~ comprises a pixel. The pixel has a pixel volume which comprises a reservoir volume and an image volume.

Delete the paragraph on page 3, between lines 6-8 of the specification.

Replace the paragraph on page 3, between lines 9-12 of the specification with the following:

In an embodiment ~~as defined in claim 2 of the present system~~, the at least one fill electrode is positioned to obtain a fill electric field directed to simultaneously move the different types of particles from the sub-volumes into the image volume. This has the advantage that the time required to fill the image volume with the particles is decreased considerably.

Replace the paragraph on page 3, between lines 13-21 of the specification with the following:

In an embodiment ~~as defined in claim 3~~ of the present system, the fill electric field can be controlled for each type of particle separately, and thus, the number of particles of each type which are transported from the sub-volumes to the image volume can be freely controlled. Consequently, it is possible to make all color shades based on the different colors of the different particles. In the prior art, at least three different cells with different colored particles would be required to be able to make the same color shades as the pixel with a single image volume in accordance with the invention. Thus, although the reservoir volume will occupy some of the space of the three prior art cells, the pixel in accordance with ~~the invention~~ an embodiment of the present system will be substantially smaller than the prior art pixel. In addition, the pixel will be brighter.

Replace the paragraph on page 3, between lines 25-29 of the specification with the following:

In an embodiment ~~as claimed in claim 5~~ of the present system, additional shielding electrodes, which may comprise shielding portions of the fill electrode are arranged in-between the sub-volumes to shield the fill electric field in a particular sub-volume from the fill electric field in an adjacent sub-volume. This has the advantage that the sub fill electric fields which occur in

the sub-volumes substantially act on the particles in the corresponding sub-volume only.

Replace the paragraph on page 3, between lines 30-34 of the specification with the following:

In an embodiment ~~as claimed in claim 6~~ of the present system, the pixel comprises a further fill electrode which is positioned to enlarge the fill electric field in the image volume to speed up the filling of the visible part of the pixel by particles entering the image volume from the sub-volumes.

Replace the paragraph on page 4, between lines 1-6 of the specification with the following:

In an embodiment ~~as claimed in claim 7~~ of the present system, the further fill electrode is positioned maximally far from the area where the particles enter the image volume at the border of the image volume. The further fill electrode may be positioned inside or just outside the image volume. It is also possible to provide the further fill electrode in the image volume at a shorter distance to the sub-volumes such that the further fill electric field caused by the further fill electrode increases and the particles will fill the image volume faster.

Replace the paragraph on page 4, between lines 7-11 of the specification with the following:

In an embodiment ~~as claimed in claim 9 of the present system,~~ the distance of the further fill electrode to the sub-volumes varies such that the further fill electrode is nearest to the sub-volume containing the particles with the lowest mobility. This has the advantage that a higher field is obtained for the slowest particles such that the speed of movement of these particles increases and the filling time of the image volume decreases.

Replace the paragraph on page 4, between lines 12-20 of the specification with the following:

In an embodiment ~~as claimed in claim 10 of the present system,~~ the pixel comprises a further reservoir volume. The pixel comprises further select electrodes and fill electrodes which are associated with the further reservoir in the same manner as the first mentioned select electrodes and the first mentioned fill electrodes are associated with the first mentioned reservoir volume. The function of the further reservoir volume is the same as the first mentioned reservoir volume. This embodiment has the advantage that the refresh rate of the display can be increased because the selection process in one of the reservoirs can be performed in parallel with the filling or reset process from another reservoir. ~~as defined in claim 11.~~ It is possible to associate more than two reservoirs with a same image volume.

Replace the paragraph on page 4, between lines 21-27 of the specification with the following:

In an embodiment ~~as claimed in claim 13~~ of the present system, the reset means remove the particles from the image volume. This enables to periodically change the color of a pixel, which enables to display time varying display information. ~~Preferably, the~~The particles removed from the image volume are stored in a store volume in the reservoir volume. If all the particles are stored in the same store volume, it is easier to separate the different particles during the select phase wherein the select electric field is present, because the particles all have substantially the same starting position.

Replace the paragraph on page 4, between lines 28-30 of the specification with the following:

In an embodiment ~~as claimed in claim 14~~ of the present system, the reset means comprise at least one of the select electrodes for attracting the particles in the image volume towards the store volume which will be positioned adjacent to the one of the select electrodes.

Replace the paragraph spanning pages 4-5, between page 4, line 31, and page 5, line 5 of the specification with the following amended paragraph:

In an embodiment ~~as claimed in claim 15~~ of the present system, the mobility of the different type of particles has a predetermined ratio such that it is possible to separate the different particles in their respective sub-volumes of the reservoir volume starting from the store volume where all the particles are gathered at the start of the separating phase. For example, if the length of the reservoir volume in the direction of the movement of the particles during the separating phase is substantially three times the area required by the different particles in the different sub-volumes, the ratio should be in the order of 1:2:3. In time period sufficient to move the fastest particles to the sub-volume the farthest away from the store volume, the slowest particles will move to the nearest sub-volume.

Replace the paragraph on page 5, between lines 16-19 of the specification with the following:

In an embodiment ~~as claimed in claim 16~~ of the present system, all the particles are charged with a charge of the same polarity, thus all the three different particles are charged positively or negatively. The mobilities of the particles are different. With three suitably different colored particles it is possible to make a full color display.

Replace the paragraph on page 5, between lines 20-25 of the specification with the following:

In an embodiment ~~as claimed in claim 17~~ of the present system, the particles comprise a first and a second type of particles both being charged in the same polarity and having different mobilities and a third type of particles being charged oppositely. This has the advantage that only the two particles which have the same polarity need to be separated. The difference in mobility will be less than if three sets of particles which the same polarity and three different mobilities have to be used.

Replace the paragraph on page 5, between lines 26-31 of the specification with the following:

In an embodiment ~~as claimed in claim 18~~ of the present system, the pixel comprises a reset electrode to attract the particles during a reset phase wherein the particles have to be moved into a store volume in the reservoir volume. The reset electrode increases the electrical field in the direction of the store volume to increase the speed of the particles moving towards the store volume. This is especially true for particles which are the furthest away from the store volume.



Replace the paragraph spanning pages 5-6, between page 5, line 32, and page 6, line 5 of the specification with the following amended paragraph:

In an embodiment ~~as claimed in claim 19~~ of the present system the reset electrode is associated with the center of the image volume. For example the reset electrode is positioned on top of the center image volume or within the image volume. First, a voltage is supplied to the reset electrode to attract the particles towards the center of the image volume, and secondly a voltage is supplied to the select electrodes which ~~is~~ are associated with the store volume to attract the particles to move from the center of the image volume into the store volume. This allows ~~to shorten the~~ shortened reset period as the slowest pixels which were the farthest away from the store volume need to travel a shorter distance from the center of the pixel to the store volume.

Replace the paragraph on page 6, between lines 6-7 of the specification with the following:

These and other aspects of the display of the ~~invention~~ present system will be elucidated and described with reference to the embodiments described hereinafter.